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10/766,649

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EXAMINER

CHANG, VICTOR S

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/766,649  
Filing Date: January 27, 2004  
Appellant(s): AHLUWALIA ET AL.

\_\_\_\_\_  
John Murnane and Alicia Russo  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 3/10/2009 appealing from the Office action mailed 4/29/2008.

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**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

A related appeal was filed in U.S. Patent Application No. 10/354,220 on 10/4/2006. A board decision was mailed on 8/28/2007, and attached to an appeal brief filed 2/26/2009, section XII.

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

US 6093481	Lynn et al.	7-2000
US 6365533	Horner Jr. et al.	4-2002
US 5713974	Martin et al.	2-1998

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 7, 13 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lynn et al. [US 6093481] in view of Horner, Jr. et al. [US 6365533] and Martin et al. [US 5713974].

Lynn's invention relates to an insulation sheathing (facer) for an insulation board. Fig. 2 illustrates an embodiment that the facer is a bilaminate on each major surface of a foam board. The inner layers 17 and 18 of the bilaminates may be any fibrous layer, a metallic layer, etc., such as a glass fiber sheet or an aluminum sheet [col. 4, ll. 50-65]. The outer layers 11 and 12 may be a thermoplastic polymer or polymeric mixture possesses a combination of properties include good chemical and physical stability, high mechanical strength, durability, heat and chemical resistance and thermal insulation properties. Any conventional foam facer having aforementioned properties may be used as outer layer [col. 3, ll. 26-37]. The outer polymeric layers may be modified by additives, such as filler, fire retardants, etc., to meet particular requirements [col. 3, ll. 49-53]. The attachment of outer layers 11 and 12 to other layers in the facer laminate may be facilitated by any adhesive material (binder) or other fastening aid (e.g., adhesion promoter) known for use in binding plastic films [col. 3, ll. 9-14].

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For claims 1, 7, 13 and 16-20, Lynn lacks a teaching that the outer layer of the bilaminate comprises a prefabricated microcells component, a surfactant component, and surfactant-generated microcells. However, Horner's invention relates to a foamed facer for an insulation board. The facer comprises an adhered surface coating of a prefoamed composition on a glass mat [col. 4, ll. 16-20]. The composition comprises thixotropic polymer latex (binder), foam sustaining surfactant (surfactant generated microcells), filler such as clays, and flame retardant (fire resistant) [col. 3, lines 1-22 and 45-46]. Surfactants are organic types such as ammonium salts of a C<sub>10</sub> to C<sub>22</sub> fatty acid (fast soap) [col. 3, ll. 51-53]. The facer is damage resistant (durability) [col. 5, ll. 13-16]. Further, Martin's invention relates to exterior coatings containing insulating microspheres of glass or polymeric material (prefabricated microcells) for providing a high insulating value [abstract; col. 3, ll. 62-67]. The insulation coating contains an admixture of microspheres, pigments, latex and acrylic materials, etc. The insulation coatings may be used for roofs, etc. [col. 10, ll. 36-50]. It would have been obvious to one of ordinary skill in the art to manufacture Lynn's bilaminate with Horner's adhesive latex/filler/surfactant coating composition, and incorporating Martin's microspheres (preformed microcells) as an additive in the coating composition in the coating composition, as the outer layers of the bilaminate facer, motivated by the desire to provide improved durability and thermal insulation value to the facer, and with a reasonable expectation of success at the time the claimed invention was made.

#### **(10) Response to Argument**

Appellants argue in Appeal Brief pages 7-8:

“the Final Office Action offers nothing more than the conclusory statement that, since all of elements of Claim 1 are allegedly well known, it would have been obvious to one of ordinary skill in the art to modify Lynn et al. to arrive at Appellant's claimed invention in order to improve the durability and the thermal insulation value of the facer. Even if the

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cited art teaches points 1-3 above as alleged, the Final Office Action is completely lacking of a rationale regarding the level of one of ordinary skill in the art at the time of Appellant's invention as it pertains to the knowledge required to incorporate "Horner's adhesive latex/filler/surfactant coating composition" and "Martin's microspheres" within the outer layers of the bilaminate facet of Lynn et al., let alone address the knowledge required to incorporate those features while achieving the benefits alleged by the Final Office Action."

However, since the prior art references are of the same field of endeavor (facers), combining the components to obtain beneficial effects for an improved product is *prima facie* obvious to one of ordinary skill in the art. Since Horner teaches a coating composition comprising additives (e.g., filler of clay, flame retardant, etc.), adding microspheres as an additive is deemed to be an obvious routine optimization to one of ordinary skill in the art. Further, since Lynn teaches that any conventional foam facer having desired properties (high durability, thermal insulation, etc.) may be used as outer layer, the collective teachings of prior art render the claimed invention obvious. Absence of any evidence that the combination would necessarily fail, nor any process limitation in the claim language, appellants' speculative arguments relating to the process requirements lack any credible support, and are immaterial to the patentability.

Appellants argue page 9:

"the facers of Horner Jr. et al. include a coating that is from about 5 mils to about 100 mils ... one of ordinary skill in the art looking to Homer Jr. et al. would not combine the teachings of Homer et al. with Lynn et al. because Homer et al. relates to facers that are very thick (e.g. 100 mils) whereas Lynn et al. teaches facets that are films (i.e. very thin) having a thickness of 0.3 to 5 mils for composite facets".

However, the thickness of the foamed layer is absent from the claims. Even if the thickness of the foamed outer layer is considered, while Lynn teaches that the thickness of polymeric facer layers 11, 12 of solid (un-foamed) film, such as PET film, may be from *about* 0.3 mil to 5 mils [col. 5, ll. 19-21], Lynn is silent about the thickness of a foamed outer layer. Since Lynn teaches

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that *any conventional foam facer* may be used as outer layer, a workable thickness of foamed outer layer is deemed to be an obvious routine optimization to one of ordinary skill in the art, motivated by the desire to obtain required insulation value for the same end use as the claimed invention. There is no reason whatsoever to believe that Lynn's facer necessarily requires a thickness which would render the foamed layer formed of Horner's coating composition nonfunctional. Moreover, the examiner notes appellants have admitted that Horner teaches a foamed coating having thickness from *about* 5 to 100 mils, at least the end points of the thicknesses of prior art overlap at *about* 5 mils.

**(11) Related Proceeding(s) Appendix**

A copy of the court or Board decision identified in the Related Appeals section of this examiner's answer is provided in the Appeal Brief filed 2/26/2009.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Victor S Chang/

Primary Examiner, Art Unit 1794

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